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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/021,125	10/30/2001	Enrico Dolazza	56229-098 (ANA-200)	2463

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EXAMINER	
ROSARIO-VASQUEZ, DENNIS	
ART UNIT	**PAPER NUMBER**
2621	

DATE MAILED: 09/07/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 10/021,125	Applicant(s) DOLAZZA, ENRICO
	Examiner Dennis Rosario-Vasquez	Art Unit 2621

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on 30 October 2001.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) 1-39 is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) 1-39 is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on 30 October 2001 is/are: a)☐ accepted or b)☒ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Drawings

1. The drawings are objected to as failing to comply with 37 CFR 1.84(p)(5) because they do not include the following reference sign(s) mentioned in the description:

100 in fig. 2, 300 and 302 in fig. 5.

Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The replacement sheet(s) should be labeled "Replacement Sheet" in the page header (as per 37 CFR 1.84(c)) so as not to obstruct any portion of the drawing figures. If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Claim Rejections - 35 USC § 102

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

3. Claims 1-39 are rejected under 35 U.S.C. 102(b) as being anticipated by Bonneau et al. (US Patent 5,870,502 A).

Regarding claim 1, Bonneau et al. discloses a method and system of providing a spatially filtered version of an image by selectively modifying image pixel amplitudes as a predetermined function of spatial frequency components of the image pixels, comprising:

a) dividing an overall frequency range (Fig. 8, num. 855) of the image (fig. 8. num. 803 and 805) into a plurality of constituent frequency ranges (fig.8, num. 851 has a range of 0 to f/2 and 853 has a range from 0 to f.);

b) providing, for each of the constituent frequency ranges (fig. 8, num. 851 and 853), a spatial filter ("inverse filter" is applied to each image 803 and 805 as mentioned in col. 16, line 48-50.) that receives the image pixels (fig. 8, num. 803 and 805 are images that have "intensity...values" in col. 4, line 14.) and produces a filtered output (The image pixels of 803 and 807 outputs an image, num. 809.) representative of the spatial frequency ("0 to f/4" in col. 17, line 14) components of the pixels (0 to f/4 for image 809 is a "low frequency component" as mentioned in col. 17, lines 11-14) that are within that constituent frequency range (fig. 8, num. 853 contains the range from 0 to f/4 as mentioned in col. 17, lines 13,14.);

c) scaling (Fig. 8, num. 820:SCALE 1) each [of the] filtered output[s] (The image pixels of 803 and 805 outputs a combined image, num. 809 that changes scale 2 to "next lowest scale", SCALE 1 as mentioned in col. 16, lines 48-50.) by a scaling factor ("factor of 2" in col. 9, lines 44,45) specific to the associated spatial filter ("inverse filter" as mentioned in col. 16, line 48-50.), so as to produce a scaled output (The output of fig. 8, num. 809 is scaled output.); and,

d) combining the scaled output[s] (The output of fig. 8, num. 809 is scaled output.) to produce a composite output (fig. 8, num. 815 produced from multiple frequency components as mentioned in col. 17, lines 16,17.) representative of the spatially filtered version of the image (fig. 8, num. 801 and 805 are images used to produce image 815.).

Regarding claim 2, Bonneau et al. discloses a method according to claim 1, wherein the constituent frequency ranges (fig.8, num. 851 and 853) are defined by octaves, such that each constituent frequency range (fig. 8, num 851 has a range of f/4.) is one half as wide as the next larger constituent frequency range (Fig. 8, num. 853 has a range of f/2 which is twice as wide as the range of f/4).

Regarding claim 3, Bonneau et al. discloses a method according to claim 1, wherein the constituent frequency ranges (fig.8, num. 851 and 853) are substantially contiguous (Fig. 8, num. 853 has a range from 0 to f/2 which corresponds to the shaded region of fig. 8, num 853 as mentioned in col. 17, lines 4-16).

Regarding claim 4, Bonneau et al. discloses a method according to claim 1, wherein the constituent frequency ranges (fig.8, num. 851 and 853) overlap one another (The range of fig. 8, num. 853 of 0 to f overlaps or contains the range of fig. 8, num. 851 of 0 to f/2).

Regarding claim 5, Bonneau et al. discloses a method according to claim 1, wherein each of the scaling factors ("factor of 2" is used in a "scale" in col. 9, lines 44,45. Note that scale represents high and low frequency components that have a bandwidth from 0 to f as shown in fig. 8, num. 853.) is a function (increased or decreased by a factor of two in col. 9, lines 42-45.) of time (Fig. 7, num. 711:REACHED DESIRED IMAGE RESOLUTION? and 713:PROCESS NEXT SCALE mentioned in col. 15, lines 29-38 are steps performed in "real time" in col. 15, line 31 that corresponds with fig. 8, num. 809 for the next process using SCALE 1 of fig. 8.)

Regarding claim 6, Bonneau et al. discloses a method according to claim 5, wherein the scaling factors vary as a function of time so as to sweep (Fig. 8, num. 853 is divided into a high and low filtering regions.) a pass-band (Fig. 8, has a shaded rectangular area that corresponds with the pass-band.) having a predetermined bandwidth (The shaded rectangular area of fig. 8, num. 853 and mentioned in col. 17, lines 11-16.) across the overall frequency range (The range of fig. 8, num. 853 is from 0 to f), such that image components("high and low" mentioned in col. 17, lines 11-16) characterized by frequencies (Fig. 8, num. 809 and 813 are high and low frequency components.) within the pass-band (Fig. 8, has a rectangular area that corresponds with the pass-band.) are enhanced (The images of fig. 8, num. 809 and 813 are combined to produce a desired image 815 that corresponds with fig. 7, num. 711:REACHED DESIRED IMAGE RESOLUTION?.) or passed without substantial attenuation.

Regarding claim 7, Bonneau et al. discloses a method according to claim 6, wherein image components ("high and low" mentioned in col. 17, lines 11-16) characterized by frequencies (Fig. 8, num. 809 and 813 are high and low frequency components.) outside of the pass-band (Fig. 8, has a shaded rectangular area that corresponds with the pass-band.) are substantially suppressed (The image of fig. 8, num 813 has features that are not present in the image of fig. 8, num. 809 because the image of fig. 8, num. 813 has high frequency components that are suppressed in fig. 8, num. 809 due to the shaded region that passes 809 and suppresses 813.)

Regarding claim 8, Bonneau et al. discloses a method according to claim 6, wherein image components ("high and low" mentioned in col. 17, lines 11-16) characterized by frequencies (Fig. 8, num. 809 and 813 are high and low frequency components.) outside of the pass-band (Fig. 8, has a shaded rectangular area that corresponds with the pass-band.) are attenuated but not substantially suppressed (Fig. 8, num. 809 has white spots remnants that correspond to 813.)

Claim 10 is similar to claim 6 except for requiring two or more pass-bands which is shown in fig. 8, num. 853 by the shaded rectangle for one pass band and an unshaded rectangle for another pass band.

Regarding claim 14, Bonneau et al. discloses a method according to claim 1, wherein the spatial filter ("inverse filter" is applied to each image 803 and 805 as mentioned in col. 16, line 48-50.) produces a filtered output ("L" and "H" are outputted from of fig. 803 and 805, respectively.) as a predetermined function of a neighborhood of pixels (Fig. 805 has a grid of small squares applied to an image.).

Claim 15, 29 and 39 were addressed in claim 1.

Claim 16 was addressed in claim 2.

Claim 17 was addressed in claim 3.

Claim 18 was addressed in claim 4.

Claims 9, 19 and 30 were addressed in claim 5.

Claims 20 and 31 were addressed in claim 6.

Claims 11, 21 and 32 were addressed in claim 7.

Claims 12, 22 and 33 were addressed in claim 8.

Claims 13, 23 and 34 were addressed in claim 9.

Claims 24 and 35 were addressed in claim 10.

Claims 25 and 36 were addressed in clam 11.

Claims 26 and 37 were addressed in claim 12.

Claims 27 and 38 were addressed in claim 13.

Claim 28 was addressed in claim 14.

Conclusion

4. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Vossing et al. (US Patent 6,487,528 B1) is pertinent as teaching a method of using filters that divide a spectrum into frequency bands and calculates a scale factor as mentioned in col. 4, lines 3-6.

Oikawa (US Patent 5,521,713 A) is pertinent as teaching a method of filtering and dividing (fig. 1, num. 102), scale factor calculating (fig. 1, numerals 108-115) and combining (fig. 1, num. 105).

5. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Dennis Rosario-Vasquez whose telephone number is 703-305-5431. The examiner can normally be reached on 9-5.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Leo Boudreau can be reached on 703-305-4706. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

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